

**IN THE CLAIMS:**

Please amend the claims as indicated below.

Claims 1-29 (withdrawn).

- 1    30. (original) A method of fabricating a composite electrolyte for use in an  
2    electrochemical fuel cell, comprising:
  - 3        (i) applying onto a surface of a substrate a viscous liquid composition of (a)  
4              an inorganic cation exchange material, (b) silica-based material, (c) a  
5              polymer-based material, and (d) a solvent-dispersant;
  - 6        (ii) spreading the viscous liquid composition to form a uniform thickness layer  
7              on the substrate; and
  - 8        (iii) allowing the solvent to evaporate from the viscous liquid composition to  
9              yield the composite electrolyte,  
10              wherein the inorganic cation exchange material comprises about 0.1 wt%  
11              to about 99 wt% of the composite electrolyte.
- 1    31. (original) The method of claim 30, wherein the silica-based material comprises  
2    about 0.1 wt% to about 70 wt%, and the polymer-based material comprises about 0.1  
3    wt% to 99.9 wt% of the composite electrolyte.
- 1    32. (original) The method of claim 30 wherein step (ii) includes drawing the viscous  
2    liquid composition through a doctor blade assembly.
- 1    33. (original) The method of claim 30 wherein step (iii) includes heating the viscous  
2    liquid composition.
- 1    34. (original) The method of claim 30 wherein the inorganic cation exchange material  
2    comprises about 0.1 wt% to about 30 wt%, the silica-based material comprises about 0.1  
3    wt% to about 15 wt%, and the polymer-based material comprises about 40 wt% to 99  
4    wt% of the composite electrolyte.

1    35. (currently amended) The method of claim [19] 30 wherein the inorganic cation  
2    exchange material is selected from the group consisting of clay, zeolite, hydrous oxide,  
3    inorganic and salt.

1    36. (original) The method of claim 35 wherein the clay includes an aluminosilicate-  
2    based exchange material selected from the group consisting of montmorillonite, kaolinite,  
3    vermiculite, smectite, hectorite, mica, bentonite, nontronite, beidellite, volkonskoite,  
4    saponite, magadite, kenyaite, zeolite, alumina, and rutile.

1    37. (original) The method of claim 35, wherein the clay is modified to make it more  
2    compatible with organic matrices, a clay modification including exfoliation which helps  
3    to separate platelets of inorganic substance.

1    38. (original) The method of claim 35, wherein the clay includes a modified  
2    montmorillonite consisting of montmorillonite treated with a modifier material selected  
3    from a group consisting of aminododecanoic acid, trimethyl stearate ammonium,  
4    octadecylamine, and methyl dihydroxy hydrogenated tallow ammonium.

1    39. (original) The method of claim 30 wherein the polymer-based material has a  
2    linear, branched, or netted morphology.

1    40. (original) The method of claim 30 wherein the polymer-based material includes  
2    one of acrylonitrile/butadiene/styrene rubber (ABS), styrene butadiene/acrylate/acetate  
3    polymer blends, epoxides, polypropylene, polycarbonate, polystyrene, polyethylene,  
4    polyaryl ethers, and polysulfones.

1    41. (original) The method of claim 30 wherein the solvent-dispersant comprises  
2    water, N-methyl pyrrolidinone, dimethyl sulfoxide, dimethyl acidimide, and

3 dimethylformamide.

1 42. (original) The method of claim 30 wherein the inorganic cation exchange  
2 material, the silica-based material and the polymer-based material comprise 90 wt % or  
3 more of the solids content of the composite electrolyte.

1 43. (original) The method of claim 30 wherein the composite electrolyte when  
2 measured in the substantially dried state consists essentially of the inorganic cation  
3 exchange material, the silica-based material and the polymer-based material.

1 44. (currently amended) The method of claim [19] 30 wherein the composite  
2 electrolyte has a proton conductivity of about 0.05 S/cm or higher.

Claims 45-50 (withdrawn).

Respectfully submitted,

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